CLAIMS (with indication of amended or new):

4. (Amended) A semiconductor photo-detector, comprising:

an intrinsic or a first conduction type semiconductor layer, a photo-absorption layer comprising a superlattice semiconductor layer or a multiple quantum well semiconductor layer, and a schottky electrode are disposed on a substrate having a top surface and an end surface meeting at an edge;

said photo-absorption layer being spaced from said edge of said substrate adjoining said end surface;

a semiconductor multilayer structure of large schottky-barrier height having a schottky barrier higher in schottky barrier height than a schottky barrier between said photo-absorption layer and said schottky electrode is formed between said photo-absorption layer and said schottky electrode; and

a light incident facet on said end surface and forming an acute angle with said top surface,

wherein incident light is refracted at said light incident facet and transits said photo-absorption layer at an angle with respect to an orthogonal of said photo-absorption layer.

8. (Amended) A semiconductor photo-detector, comprising:

a substrate having a top surface and an end surface meeting at an edge;

a photo-absorption part comprising a semiconductor multilayer structure including a photo-absorption layer provided on said top surface of said substrate and spaced from said edge;

a light incident facet on said end surface and forming an acute angle with said top surface; and

a V- or U-shaped groove opposed to said light incident facet,

wherein incident light from an optical fiber disposed in said groove is refracted at said light incident facet and transits said photo-absorption layer at an angle with respect to an orthogonal of said photo-absorption layer.

9. (Amended) The semiconductor photo-detector as claimed in Claim 8, wherein said light incident facet and said V- or U-shaped groove are fabricated simultaneously by etching.

13. (Amended) A semiconductor photo-detector, comprising:

a substrate having a top surface and an end surface meeting at an edge;

a photo-absorption part comprising a semiconductor multilayer structure including a photo-absorption layer provided on said top surface of said substrate;

a light incident facet on said end surface and forming an acute angle with said top surface; and

said surface including an abutting portion extending from said substrate a specified lateral distance beyond said edge; and

wherein incident light from an optical waveguide precisely positioned by contacting against said abutting portion of said end surface is refracted at said light incident facet and transits said photo-absorption layer at an angle with respect to an orthogonal of said photo-absorption layer.

14. (Amended) A semiconductor photo-detector, comprising:

a substrate having a top surface and an end surface meeting at an edge;

a photo-absorption part comprising a semiconductor multilayer structure including a photo-absorption layer provided on said top surface of said substrate;

a light incident facet on said end surface and forming an acute angle with said top surface; and

an upper layer of said photo-absorption layer is terminated with a substance having a smaller refractive index than a semiconductor layer,

wherein light incident is refracted at said light incident facet and transits said photo-absorption layer at an angle with respect to an orthogonal of said photo-absorption layer such that said transit light is totally reflected by said smaller refractive index substance of said upper layer of said photo-absorption layer.

15. (Amended) A semiconductor photo-detection device, comprising:

a substrate having a top surface and an end surface meeting at an edge;

a photo-absorption part comprising a semiconductor multilayer structure including a photo-absorption layer provided on said top surface of said substrate;

a light incident facet on said end surface and forming an acute angle with said top surface;

an optical waveguide disposed opposing said light incident facet; and

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a solid or liquid interposed between said light incident facet and said optical waveguide;

wherein incident light from said optical waveguide applied to said light incident facet is refracted at said light incident facet and transits said photo-absorption layer at an angle with respect to an orthogonal of said photo-absorption layer.